

1. Remarks on four rare Species of Moths of the Family *Sphingidæ*. By W. F. KIRBY, Assistant in Zoological Department, British Museum (S. Kensington).

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(Plate XXVII.)

I am indebted to Prof. V. Ball and Mr. Nichols, of the Dublin Museum of Science and Art, in which most of the species noticed in this paper are contained, for an opportunity of carefully examining and figuring some of the more interesting *Sphingidæ* in the collection under their charge.

1. *CHÆROCAMPA MACULATOR*, Boisd. Lép. Hét. i. p. 274 (1874).

C. mœschleri, Ersch. Trudy Russk. Ent. x. p. 64, t. i. f. 1 (1876).

The identity of these supposed species has been suggested from the first. There is a specimen in the Dublin Museum which agrees with Erschoff's figure, except that it is not quite so dark, and the pale band of the hind wings is rather broader and has a slight pinkish tinge. This specimen was, I believe, received from Herr Möschler, labelled "*C. maculator*, Boisd., Colombia." Boisduval's type was from "Venezuela," and Erschoff's from "Colombia," the latter having been also received from Möschler. Boisduval's description agrees well with the Dublin specimen, except that he calls the pale band of the hind wings "*jaune terreux*," and seems to imply that the dark blotch on the fore wings is nearer the centre than is actually the case. But I am not disposed to attach too much importance to these trifling discrepancies.

2. *AMBULYX EOS*, Burm. (Plate XXVII. fig. 1.)

Philampelus eos, Burm. Desc. Rep. Arg. v. p. 350 (1878), Atlas, pl. 10. fig. 1 (1880).

The British Museum possesses a male from Buenos Ayres, presented by Walter de Rothschild, Esq., which differs so much from Burmeister's figure of the female that I have thought it worth while to figure it. The vertex, thorax, and fore wings are of a dull green, slightly inclining to olive above; the face and under surface of the thorax are greenish yellow, the base of the labrum and the knees being narrowly white. The antennæ are white behind, and reddish in front. The sides of the thorax above are of a much darker green than the centre, and are marked behind with a small white triangular spot; the first segment of the abdomen is also of a dark green, somewhat yellowish, the remainder being of a yellowish grey. The

fore wings are whitish at the base, this colour being narrowest at the costa; and rather below the costa is a small dark green spot near the base. On the inner margin, a dark green oblong mark curves upwards from the base, ceasing at one third of the distance from the costa, and rather beyond it is an oblong white spot with a dark-green centre. Below this, and beyond the oblong mark, the wing is obscurely marked with blackish, and from the upper curve of the oblong a dark obsolete mark curves towards the anal angle, before which it becomes more distinct, and is bounded outside by some whitish markings in the form of a W. In the middle of the wing are three obsolete transverse lines, ceasing at the subcostal nervure—the basal one dull green, the second obscurely blackish, and having an oblong black spot within its upper portion, and the outer one much waved, marked rather broadly with blackish above; beyond it, just below the subcostal nervure, is another blackish mark, like a broad V. The hind wings are reddish tawny, the hind margin being olive-yellow, most broadly so at the anal angle, above which it is surmounted by an irregular blackish blotch enclosing two white dots. Wings beneath yellowish green or greenish yellow, the fore wings being pale orange-yellow at the base to beyond the cell, and brighter orange along the costa; at the extremity of the cell is a blackish spot. The outer portions of the fore wings are marked with three obsolete green lines, converging towards a blackish spot at the anal angle, and the hind wings with three similar lines, which do not quite meet; the outer ones terminate in blackish blotches, between which stand two white dots.

The obscure shades and markings of the fore wings of this and the next species render them difficult to describe satisfactorily.

The fore wings are strongly falcate, and the anal angle is very strongly marked. The hind margin of the hind wings is bidentate beyond the anal angle.

3. *AMBULYX TITHONUS*, sp. n. (Plate XXVII. fig. 2.)

Very similar to *A. eos*, but the upper surface is of a much duller olive-brown; markings of the head and thorax nearly similar. Fore wings hardly white at the base and with a yellowish-olive band, slightly edged with white, running less obliquely from the inner margin just beyond the base to the median nervure, at which point it is broader than in *A. eos*; its outline is also more sinuous. Above the median nervure, and beyond it, is an obscure olive-green spot, flecked with white; at the end of the cell is a black spot, beyond which is a sinuous black line (double above) curving down to the inner margin; beyond it are two more waved blackish lines (the first double) running from the subcostal nervure half across the wing; the hind margin and anal angle are shaded into olive. Hind wings orange-tawny, paler at the anal angle, above which is a black blotch marked with two white dots, from which runs an ill-defined submarginal blackish stripe; the hind margin is also narrowly blackish. Wings beneath of a more uniform yellowish green than

in *A. eos* and the fore wings paler yellow at the base; the black discoidal spot is less strongly marked, and is followed by three short dusky lines on the costa; the hind margin is grey in the middle, bordered by a suffused blackish line running from the tip to the anal angle; on the inner margin, within the anal angle, is a short curved blackish line; nearer the base the inner margin is reddish. Hind wings beneath with a black spot at the end of the cell, and three obsolete greenish lines beyond (the middle most obscure), terminating in a black blotch, on which stands a yellowish-white spot, the two seen above having become united beneath.

The wings are rather less falcate than in *A. eos*, and the hind wings have only one tooth within the anal angle.

The example of this species was received by the Dublin Museum as "*Ambulyx lycidas*, Brazil;" but M. C. Oberthür of Rennes, who has kindly compared the figure with the type of that species (described by Boisduval, Lép. Hét. i. p. 191) from Brazil, informs me that the outline of the wings (which I have reproduced here from his sketch, Plate XXVII. fig. A) is very different.

4. PROTOPARCE ABADONNA. (Plate XXVII. fig. 3.)

Sphinx abadonna, Fabr. Ent. Syst. Suppl. p. 435 (1798).

Protoparce abadonna, Kirby, Trans. Ent. Soc. Lond. 1877, p. 238.

Sphinx godarti, MacL. King's Survey of Coasts of Australia, ii. p. 463 (1827).

I am glad to have an opportunity of figuring this species, from a specimen from Queensland in the Dublin Museum; it is singular that it has not yet been obtained for the British Museum. It is quite distinct from the common Australian *P. distans*, Butl. Macleay's description is so good as to render it unnecessary to redescribe the species here. I believe it to be *P. abadonna*, described by Fabricius from the East Indies, and I therefore retain his name provisionally, though I do not feel quite so certain of the correctness of this identification.

EXPLANATION OF PLATE XXVII.

Fig. 1. *Ambulyx eos*, ♂, p. 269.

2. — *tithonus*, sp. n., p. 270.

3. *Protoparce abadonna*, p. 271.

A. Outline of wing of *Ambulyx lycidas*, p. 271.